

WORLD'S COLUMBIAN EXPOSITION,  
CHICAGO, ILLS., 1892-'93.

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WAR DEPARTMENT EXHIBIT.  
MEDICAL DEPARTMENT UNITED STATES ARMY.

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No. 4.

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DESCRIPTION  
OF  
Ambulance Wagon, Travois, Etc.



BY DIRECTION OF THE SURGEON-GENERAL, U. S. A.

LOUIS A. LA GARDE,  
ASSISTANT SURGEON U. S. ARMY, IN CHARGE OF MEDICAL SECTION.

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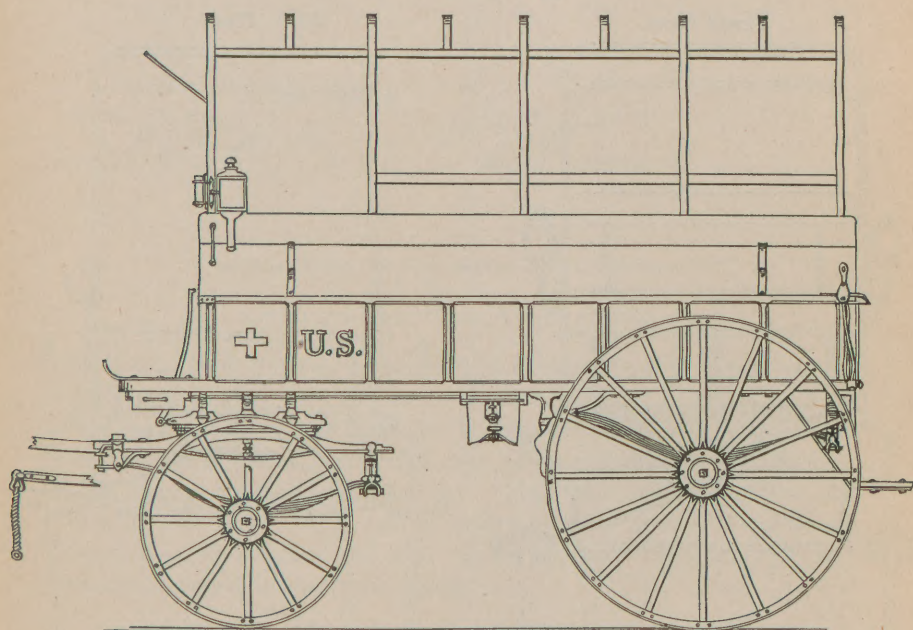
## Description of Ambulance Wagon, Travois, Etc.

### AMBULANCE WAGON.

(Improved Pattern, 1892, Figs. 1, 2 and 3.)

The ambulance wagon adopted in 1881 having proved too heavy, and requiring four animals to draw it readily over heavy roads, a new ambu-

*Side View.*



SCALE.  
0 1 2 3 4 5 6 FEET.

FIG. 1.

AMBULANCE OF 1892 PATTERN.



lance of modified pattern and of lighter draft was devised and approved by the Medical Department in 1892. The dimensions of the body are nine feet three inches long, four feet two inches wide, five feet three and a half inches high over all, seven feet eight inches long back of driver's seat, three feet eleven inches wide, five feet one-half inch high in the clear inside. The body hangs three feet four inches from the ground. The frame-work of the body is of white oak. The fore wheels traverse the body of the wagon and permit the vehicle to make abrupt turns, or to turn "on its own ground," while the diameter of the fore wheels has not been diminished so as to interfere seriously with the traction of the wagon. The driver's box is eighteen and a half inches deep, fifteen inches wide, and three feet eleven inches long. A drawer or tool-box nineteen and three-quarter inches long, seven and three-eighths inches wide, and three and three-eighths inches deep, slides under the near side of the toe-board. Two silver-plated candle lamps are secured, one on each side of the ambulance; the front glasses of the lamps are white, the outside and rear glasses red. This ambulance

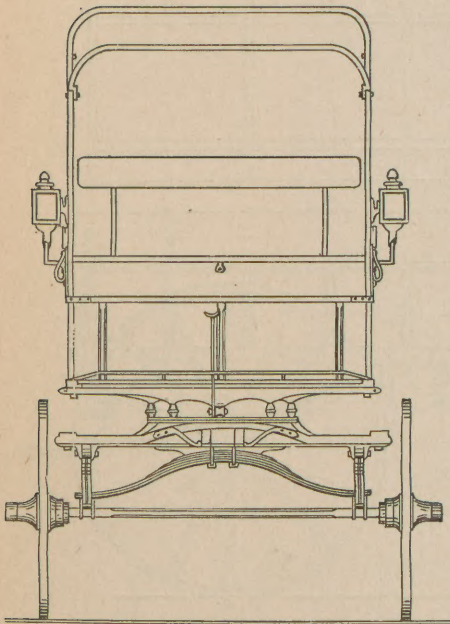
*Front View.*

FIG. 2.

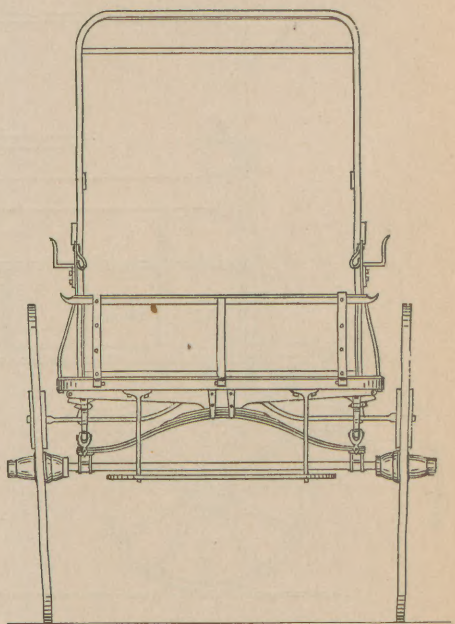
*Back View.*

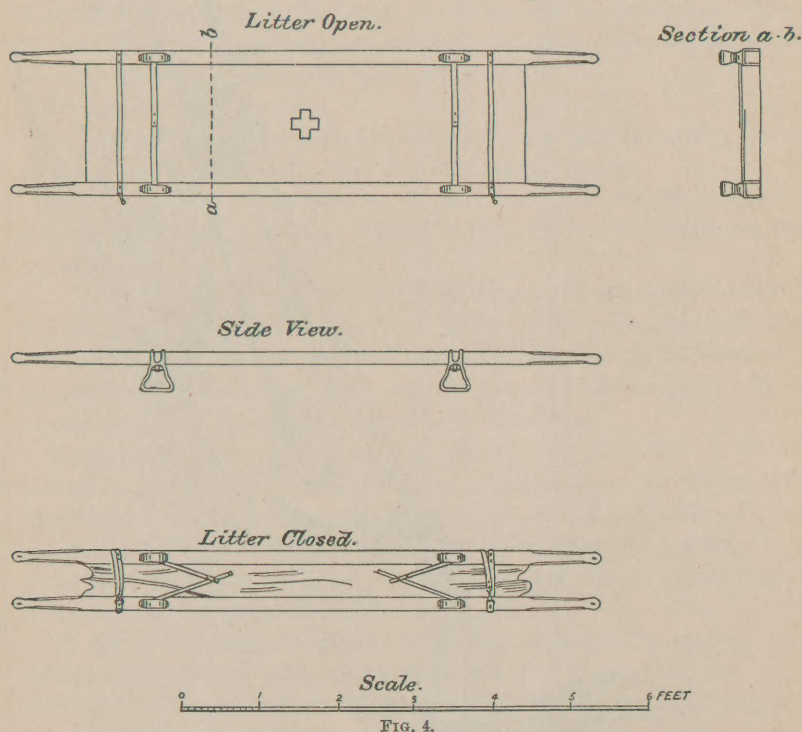
FIG. 3.

SCALE.

0 1 2 3 4 5 6 FEET.

AMBULANCE OF 1892 PATTERN.

wagon has four inside seats, two on each side, each three feet eight and three-quarter inches long and fourteen inches wide. They are held in position by two legs five-eighths inch square iron, each secured to the floor by knuckle-joints let in flush with the top of the floor. They are



LITTER FOR AMBULANCE OF 1892 PATTERN.

so arranged that they can be closely laid against the side of the wagon. Two wooden tanks, twenty-four and three-quarter inches long, nine inches wide on top, eight inches on bottom, six and a half inches deep, with one nickel-plated faucet each, are placed one inch below the sills of the body in front of the centre bar. They slide on grooved bars one and a quarter inches wide, one and seven-eighths inches deep, which extend the full width of the body of the wagon. The litter for the ambulance wagon is shown in Figure 4.

#### THE "GREENLEAF" TRAVOIS.

The travois is a vehicle that is intended for transporting the sick or wounded in countries or under conditions where the use of wheeled vehicles or other means of transportation is impracticable (Figs. 5 and 6).



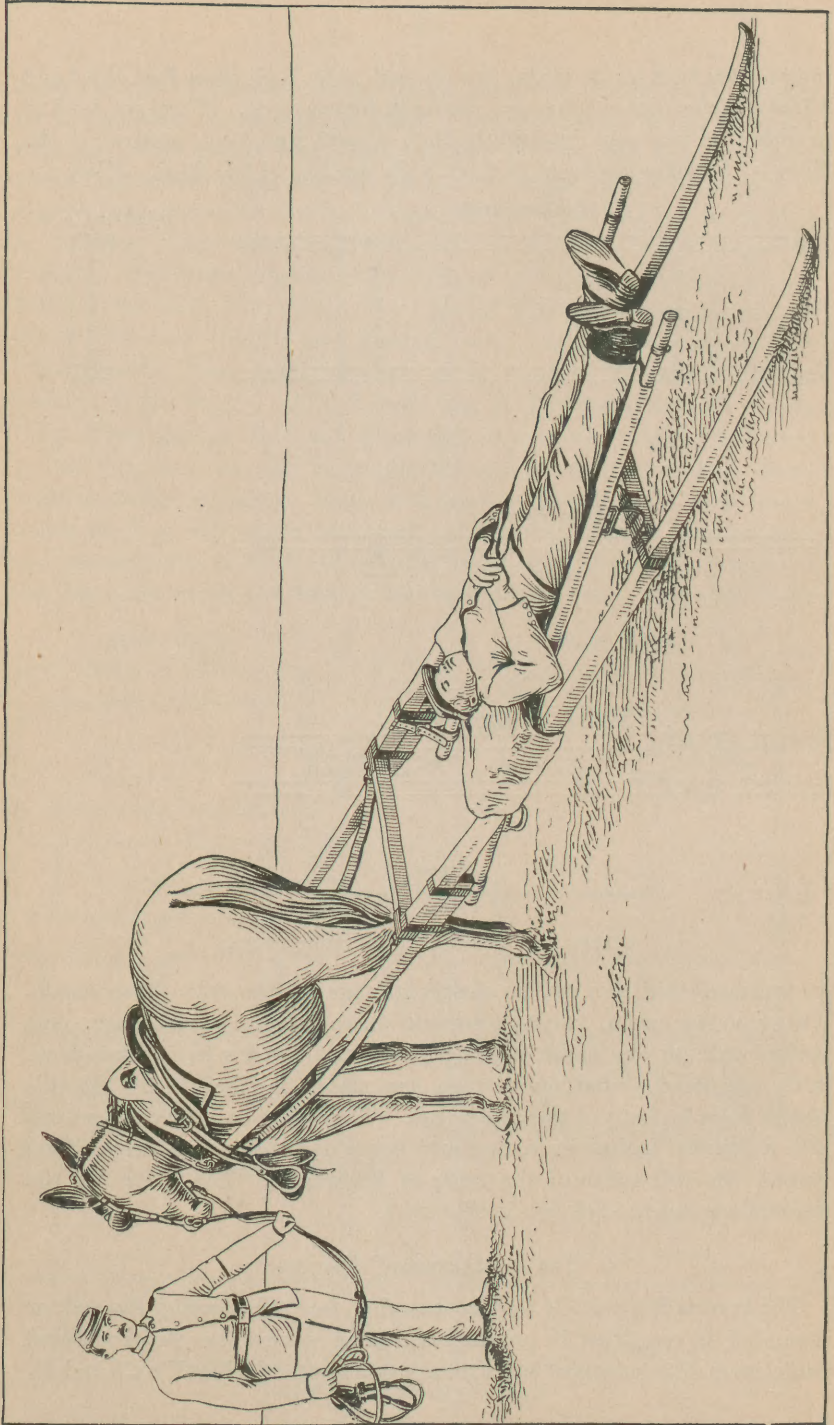


FIG. 5.



It consists of a frame, having two shafts, two side poles, and two cross-bars (Fig. 7), upon which a regulation litter may be rested and partly suspended. When in use, a horse or mule is attached to the shafts and pulls the vehicle, the poles of which drag on the ground. One pole is slightly shorter than the other, in order that in passing an obstacle the shock may be received successively by each pole, and the motion equably distributed over the entire structure.

To assemble the travois :

1. Pass the shafts through the collars on the side pole from the rear to the front, pulling them until they are snugly "home."

2. Pass the front cross-bar over the iron ends on the front of the side pole, driving it smartly "home" until its collars strike the front collar of the side pole.

3. Pass the rear cross-bar (keeping uppermost the surface on which are the flat bolts) over the rear ends of the side poles, pushing it forward until it reaches the squared points on the side poles intended for its place and passes the bolt slot on the side of the pole. Having passed this point, throw the barrel bolts into place.

To place a litter on the travois, throw the flat bolts on the rear travois bar back so that they leave the mortises free ; set the litter legs into these mortises (keeping the litter poles parallel with side poles) and throw the bolts so that the litter legs are securely fastened to the cross-bar ; then pass the leather loops on the front end of the side pole over the front handles of the litter pole.

To harness the travois, place the animal between the shafts, and, if he has on an ordinary wagon harness, put the rings that are on the front end of the shafts over the iron hook on the hames, and fasten the toggle of the trace chains to the ring on the side pole.

If the animal is saddled, after placing him between the shafts, fasten the ring that is on the front of the shafts to the rings on the pommel of the saddle by means of the straps that belong there, and secure the shafts by a surcingle passed over all.

To pack the travois, reverse the movements required to assemble the travois and separate each from its fellow ; lay one shaft, one side pole, and one cross-bar together, the front end of the shaft resting in the collar irons of the side pole, and secure them by the two leather straps furnished for that purpose ; the entire travois is then in two bundles, which are to be carried in a wagon with tentage, etc.

This travois was designed by Lieut.-Colonel Charles R. Greenleaf, Deputy Surgeon-General, U. S. Army.

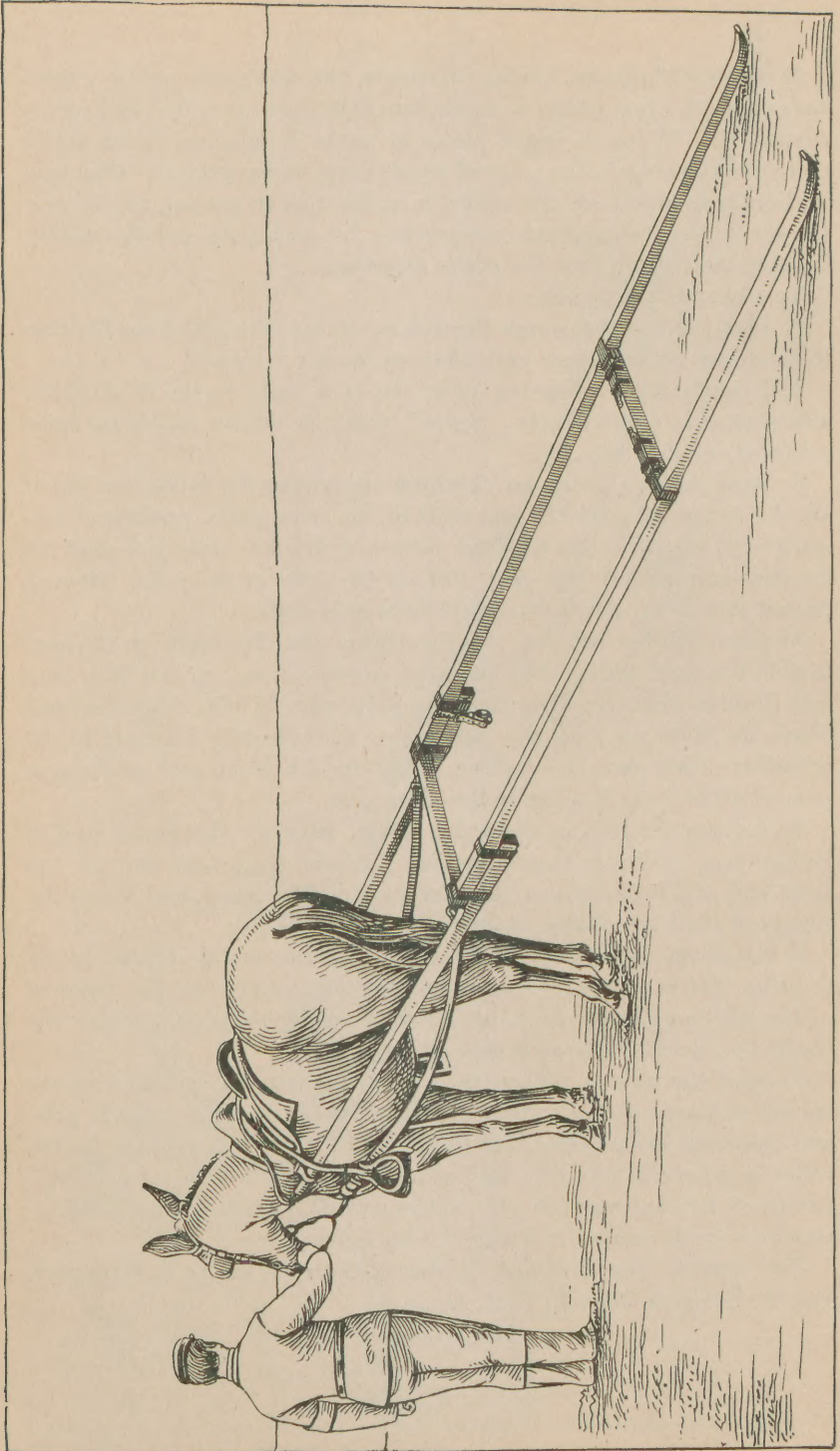


FIG. 6.



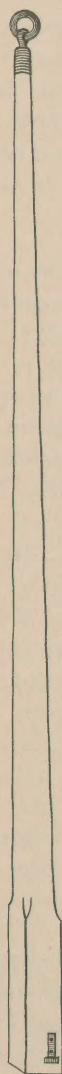
## MODELS OF AMBULANCE WAGONS.

4668.—*Model of Coolidge Ambulance Wagon.* This two-wheeled ambulance wagon was recommended in October, 1859, for the use of the Army by a Board of Medical Officers consisting of Surgeons C. A. Finley, R. S. Satterlee, C. S. Tripler, J. M. Cuyler, and Assistant Surgeon R. H. Coolidge. The body was seven feet long, four feet wide, and twenty inches deep, covered with a ribbed frame work five feet and a half inch above the floor. It was hung on platform springs. The floor of the ambulance was covered with two mattresses, and beneath them was an apparatus to arrange the beds into inclined planes. A model of this apparatus accompanies the ambulance model.

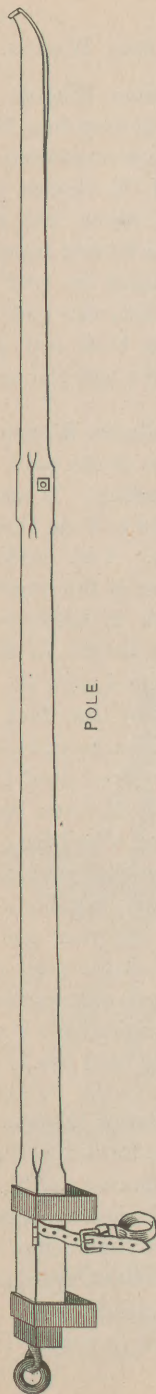
4669.—*Model of Wheeling Ambulance Wagon.* This ambulance wagon was largely used in the early part of the war. It was constructed in the Government workshops at Wheeling. It accommodated eleven or twelve sitting, or two recumbent and two or three sitting patients, and was readily drawn by two horses. Two cushioned benches were attached to the two sides of the interior of the wagon, running along its whole length. From the edge of each of these benches, fastened by hinges, depended a cushioned seat the length of the benches. These seats could be readily brought on a level with the benches, and when thus elevated could be securely fixed by iron feet, folded in the suspended seat. For the ends of the iron feet receptacles were fitted in the floor of the wagon. When both seats were raised they met in the middle of the carriage and made one continuous bed for two patients. When only one seat was raised it formed a bed for a recumbent patient, while the other bench, with its suspended seat, allowed space for at least four sitting patients. A water-tank, capable of holding five gallons, was stored under the seats in the rear end of the ambulance wagon; not unfrequently stretchers took the place of one of the water-tanks. In front of the benches a transverse seat, accommodating the driver and two or three patients, was provided. Under the seat was a box for medicines and other articles for field use.

4670.—*Model of the Rucker Ambulance Wagon.* The most serviceable ambulance wagon used during the latter part of the war was that designed by Brigadier-General D. H. Rucker, and built at the Government Repair Shops at Washington. It accommodates patients either in the sitting or lying postures. On the floor of the vehicle are two stretchers suitable for carrying one patient each, and each divided by a longitudinal hinge-joint. These stretchers have the usual handles, and run on elastic rollers so as to move readily longitudinally in the

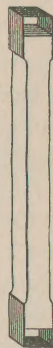




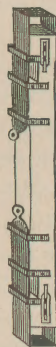
SHAFT



POLE



FRONT CROSSBAR.



REAR CROSSBAR.

GREENLEAF'S TRAVOIS.

SCALE:  $\frac{1}{2}'' = 1'$

bottom of the wagon. When required as seats, the joints of the stretchers are bent, and the two parts are made to assume a position at right angles to each other, the half which has the horizontal position being hooked to the sides of the vehicle, the other part forming the support or leg for the front of the seat. When the lower bed or stretcher is thus bent to form a seat, the upper beds are turned down to make backs for the lower seats. These backs are only joined to the sides of the wagon by hinges at their upper edge, and the lower edge can be raised upward and inward, toward the middle of the carriage. When thus elevated the two backs meet in the middle of the carriage and are there supported by iron supports, which, being hinged to their under surfaces, can be readily lowered for the purpose. In the floor are springs for the reception of the iron supports. A platform is thus built on which two patients, on stretchers, can be laid. These stretchers ordinarily are suspended from the roof of the carriage, each stretcher being slung with one side to the middle of the roof and with the other to the bend of the arched roof. The space between the upper surface of the lower and the lower surface of the upper stretchers was about twenty-one inches. This space was ventilated by lattice openings on each side of the body of the ambulance wagon. The body rested on platform springs, and the fore wheels were smaller than the hind wheels. The water-tank was under the driver's seat, and the spigot projected slightly through the side of the body. The weight was about 1,120 pounds, exceeding that of the Wheeling, which only weighed from 700 to 800 pounds, but the Rucker wagon was somewhat longer and broader.

7113.—*Model Ambulance Wagon, made at Watervliet Arsenal, under supervision of Colonel P. V. Hagner, Ordnance Corps, U. S. Army, in compliance with specifications adopted by a Board of Officers convened by S. O. No. 44, War Department, A. G. O., March 16, 1875.* This ambulance wagon was constructed so that two floors could be arranged, one above the other, allowing four severely wounded to be carried in a recumbent position.

